

U.S./METRIC CONVERSIONS AND ENERGY UNIT EQUIVALENTS

U.S. to Metric

Length (approximate)

1 yard (yd) = 0.9 meter (m)
1 mile (mi) = 1.6 kilometers (km)

Area (approximate)

1 square mile (sq yd, yd²) = 2.6 kilometers (km²)
1 acre = 0.4 hectare (ha) = 4,000 square meters (m²)

Mass/Weight (approximate)

1 pound (lb) = 0.45 kilogram (kg)
1 short ton = 2,000 pounds (lbs) = 0.9 tonne (t)

Volume (approximate)

1 quart (qt) = 0.96 liter (l)
1 gallon (gal) = 3.8 liters (l)

Energy Units (approximate)

1 British thermal unit (Btu) = 250 calories = 1,055 joules
1 calorie (cal) = 4.186 joules^a
1 barrel of oil = 42 U.S. gallons (gal) = 0.16 cubic meters (m³)
1 quadrillion Btu (quad) = about 170 million barrels of crude oil

^a Exact conversion.

Metric to U.S.

Length (approximate)

1 meter (m) = 3.3 feet (ft)

1 meter (m) = 1.1 yard (yd)

1 kilometer (km) = 0.6 mile (mi)

Area (approximate)

1 square kilometer (km²) = 0.4 square mile (sq mi, mi²)

10,000 square meters (m²) = 1 hectare (ha) = 2.5 acres

Mass/Weight (approximate)

1 gram (gm) = 0.036 ounce (oz)

1 kilogram (kg) = 2.2 pounds (lb)

1 tonne (t) = 1,000 kilograms (kg) = 1.1 short tons

Volume (approximate)

1 liter (l) = 1.06 quarts (qt)

1 liter (l) = 0.26 gallon (gal)

Energy

1 joule = 0.24 calorie (cal)

1 exajoule = 10¹⁸ joules

SOURCES: U.S. Department of Commerce, National Institutes of Standards and Technology, "Units of Weight and Measures," Miscellaneous Publication 286; and U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 1994* (Washington DC: U.S. Government Printing Office, 1995), table B1, p. 360.